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## **Final Report**

### **Salmon River Fuels Reduction Project 2002**

**FWS Agreement No. 113332J004**

**March 19, 2004**



**Salmon River Restoration Council**

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**Abstract:**

This project has enlisted private property owners from the community to steward their lands over time in a fashion that is consistent with ecosystem management over the larger landscape. The Salmon River Restoration Council (Council) has provided a crew of displaced timber workers from the community to construct fuel break systems, and perform project inventory and monitoring tasks on several parcels of private property in the Salmon River subbasin. Activities also included burning and chipping of hundreds of piles created under a JITW Grant. New restoration activities took place on approximately 20 acres. Detailed acreage is in the GIS Report. This project also allowed us to work on several Forest Service "Special Use Permit" properties on public land in the Salmon River.

Tasks in this project have been performed in consultation with the USF&WS, the USFS, the Salmon River Volunteer Fire and Rescue, and the Karuk Tribe of California. This collaborative approach has become a major component of the fuels reduction program on the Salmon River. This project has expanded community and agency support for the Council and help in the recovery and protection of the Salmon River subbasin.

**Introduction:**

**Program Objectives**

- A. Modify excessive fuel loading, with a focus on reducing the risk of catastrophic fire at several prioritized parcels of private and public lands situated in neighborhoods and located in more isolated areas.
- B. Identify and release desirable native vegetation in riparian areas and associated buffer zones and in areas associated with fuel breaks where targeted native vegetation is currently being suppressed.
- C. Continue to identify useful and efficient techniques that SRRC and landowners and managers can use regarding fuels management, erosion control, monitoring and other restoration activities in the Salmon River subbasin.
- D. Create new job opportunities for displaced workers who have worked in logging related activities or live in timber dependant communities.
- E. Enlist landowners to increase responsible stewarding of their private lands in a manner that is consistent with federal management direction at a landscape

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level. This participation will foster others in the community to partake in land managing and use activities that are more appropriate.

- F.** Fireproof concentrations of rural residencies to a condition that requires low maintenance in the future. This approach will reduce the spread of house fires into wildlands and reduce demands for residential protection during catastrophic fires.

Specifically, shaded fuel breaks were designed by thinning out flammable species, removing dead and down fuels and trimming up remaining trees and shrubs. This technique reduces and breaks up fuel continuity and fuel ladder, while maintaining the vegetative cover needed to prevent unwanted growth of flammable brush species. The resulting fuel break is a long lasting solution to vegetation management in this fire-prone area.

This project followed on the heels of a "Jobs in the Woods" grant (JITW) that was completed in the winter of 2001/2002, that winter turned out to be exceptionally rainy, making pile burning nearly impossible. The result of the wet winter was that many of the piles created with JITW funding were left for burning and chipping under this grant.

**Description of Study Area:**

The Salmon River is one of the major subbasins of the Klamath River Basin. The 751 sq. mile watershed is entirely within the Klamath National Forest. Four communities lie widely dispersed within this watershed. There are approximately 250 people residing in the drainage. The Salmon River has long been known for its exceptionally high quality waters and high value fisheries as well as boasting one of the richest regions of species diversity in the temperate zones. It is noted to have the largest population of wild Spring Chinook Salmon in California.

The Salmon River watershed is one of the highest risk fire areas on the Klamath National Forest. It has a high natural frequency of lightning occurrence. The success of USFS and CDF fire suppression activities since 1911 has increased the frequency and magnitude of catastrophic fires in the Salmon River subbasin. These large fires characteristically denude riparian and upslope areas, which increases sediment delivery to the main Salmon and increases water temperatures in tributaries, and subsequently into the Salmon and Klamath rivers (USFS Sediment Analysis, 1994). Since 1911 (91 years), 44% of the subbasin has burned. In the last 20 years, 31% of the Salmon River Watershed has burned, or reburned. This indicates a disturbing trend (SRRC analysis of FS data layers).

At present, fuel loading is at an unnaturally high hazard level in many areas of the watershed. This current fuel loading threatens to severely damage the more biologically

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intact and the recovering landscapes in the subbasin. In our discussions with Salmon River District FS personnel the SRRC has identified the need to use existing roads in a fuel break system. The Karuk Tribe has also stated that, "Fifty years of fire suppression has resulted in an ecosystem with accumulations of flammable debris capable of fueling future catastrophic fires within the watershed." (Karuk Tribal Module for the Main Stem Salmon River Watershed Analysis, Draft, June 25<sup>th</sup>, 1996). **The fire history and fire potential of this subbasin establish fire as the number one threat to fisheries and general ecosystem health and diversity.**

**Methods:**

A local crew was hired by an experienced subcontractor to complete the fuels reduction tasks under this project. Standard fuels reduction methods were used. These methods have been used and improved extensively on the Salmon River, by both SRRC and USFS crews. Specifically, some flammable plants were cut at ground level, and remaining vegetation was trimmed vertically to break up the fire ladder fuels. The removed vegetation and dead-and-down fuels were either handpiled and burned, or chipped to break up fuel continuity on the ground. Chipped material was broadcast over bare slope areas to reduce erosion and brush growth. This method produces fire-safe areas with greatly reduced risks of carrying large wildfires in the future. The combination of chipping (where you can get the chipper close to the material) and burning maximizes the efficiency of the crew and the usefulness of the chips produced for erosion abatement.

**Results:**

Fuel reduction activities were performed on approximately 20 acres on the following parcels and special use permits:

Godfrey Ranch – McCullough  
Godfrey Ranch – Brucker/Greenberg  
Godfrey Ranch – Greenberg  
Godfrey Ranch – Brucker  
Godfrey Ranch – Cafferata  
Godfrey Ranch – Berry  
Forest Mine – Cynthia Daniels  
Special Use Permit – Irene Berkery  
Special Use Permit – O. T. Mason  
Special Use Permit – Sawyers Bar Catholic Church

Hundreds of piles were chipped and burned on numerous parcels treated under the JITW 01 Grant (covering at least 28.7 acres).

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The fuel reduction work on the Berkery special use permit was well timed. The work was completed on June 6<sup>th</sup>, 2002, and the Forks fire burned down to our work the next week. We have been trying to get permission from the Forest Service to treat a strip of public land above private property and below an old road on the mainstem, but there have been too many institutional obstacles. The Forks fire started on one of the private properties below the high risk strip we wanted to treat. We are confident that if we had treated that strip, the fire could have been stopped before it got away and burned 1400 acres. The Forks fire illustrates the importance of treating more residences and emergency access areas in the watershed.

The Sawyers Bar Catholic church is the oldest Catholic Church in Northern California. Built in 1855, the Church is still standing and the cemetery is still used by the community. Coordinated fuel reduction activities have not been performed around the church for at least 25 years, and the fuels have built up to a dangerous level. The Church and cemetery sit on a public property Special Use permit within the town of Sawyers Bar. In order to get permission from the Forest Service to work on the Special Use Permit, we also had to get permission from the Sacramento Diocese of the Roman Catholic Church. We finally obtained all the permissions in early March of 2003. The SRRC crew worked with a U. S. Forest Service crew and their chipper to perform fuel reduction activities on the Church grounds in late March of 2003. While this ½ acre fuel reduction project did not make a great dent in the overwhelming hazard fuel loading on the Salmon River, it does focus attention on the need for these activities on public as well as private lands. An article on the cooperative Sawyers Bar Church fuel reduction project also appeared in the local newspaper, the Pioneer Press. Besides taking before and after pictures of this project area, we also tried a new monitoring technique – we took before and after videos from each photo monitoring point. The video clearly shows the difference between before and after the fuel reduction work. We put together a short (5 minute) movie that shows the before and after videos, along with still shots, and is narrated to explain what we do, and why.

**In-Kind Contribution:**

In-Kind contributions consisted of several categories:

1. Crewmembers travel time. The Crew rode in a “Crummy” to and from the job site on their time. Figure 2 hrs per day average = 200 hours at \$13 per hour = \$2,600.
2. Salmon River Restoration Council used GPS and GIS equipment to map project. We figured 70 hours was spent mapping locations. Using \$12 per hour for GPS use, the value of GPS comes to \$840. GIS equipment was used for making ArcInfo coverage and ArcView Project. We figured combined GIS time to be 62 hours at \$60 per hour = \$3,600. Some staff

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time was also donated – we estimate 344.5 Hrs at \$16 per hour = \$5,511.68.

3. Landowner participation to date (includes prior JITW follow up work) is estimated to be approximately 1,200 hours at \$14 hour = \$16,800.

This totals \$29,351.68 in In-Kind Contributions to date. Landowners will continue to maintain the project on their properties. The original In-Kind estimate was \$28,690.88. With the out-year landowner maintenance, we expect the final In-Kind contribution will greatly surpass the original estimate.

**APPENDICES:**

Appendix 1: Before and After Photos

Appendix 2: Project Location Map and site maps

Report prepared by:

  
Jim Villeponteaux

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**Before & After Photos**



Eddy Gulch Before & After (JITW01)



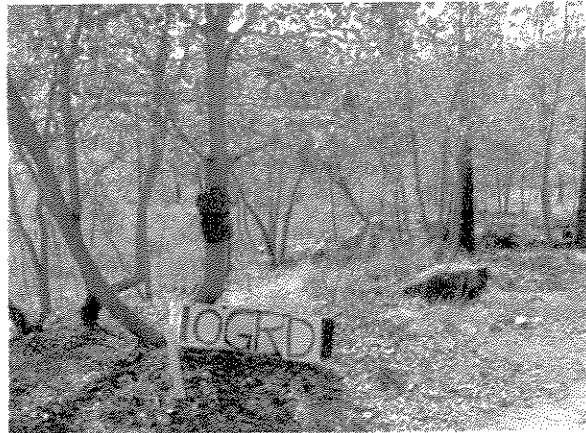
Eddy Gulch Before & After (JITW01)



Godfrey Ranch Before & After (TF02)



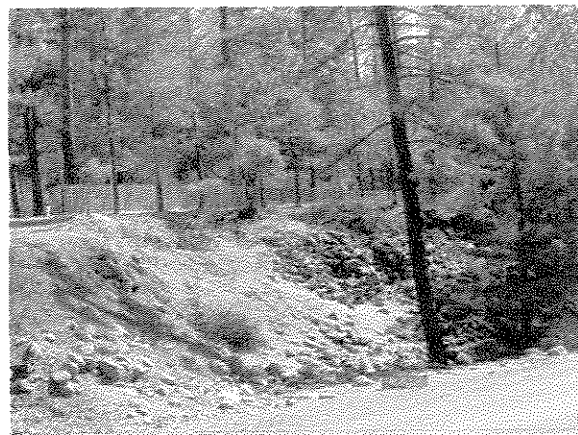
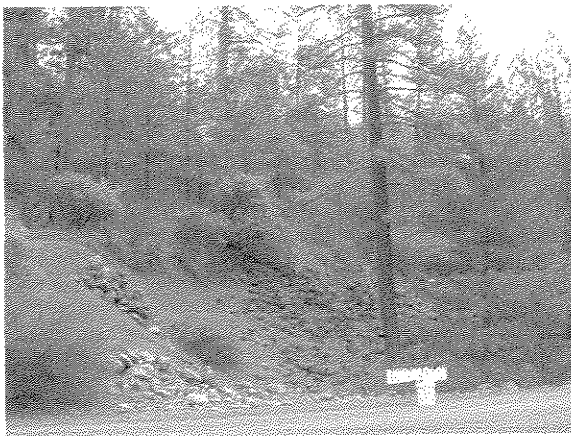
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**Before & After Photos**



Godfrey Ranch Before & After (TF02)



Godfrey Ranch Before & After (TF02)



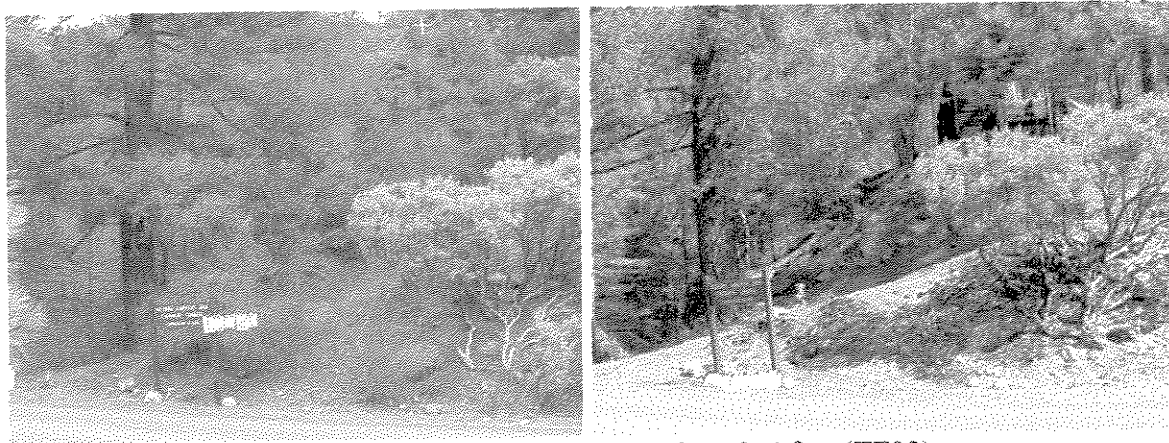
Sawyers Bar Catholic Church Before & After (TF02)



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Sawyers Bar Catholic Church Before & After (TF02)



Sawyers Bar Catholic Church Before & After (TF02)



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